



MM100A

1KW Middle inertia

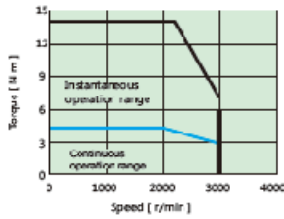
MH100A

1KW High inertia



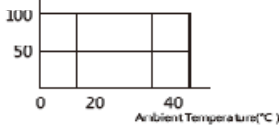
NT characteristics

NT characteristics

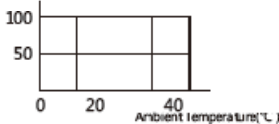


Continuous torque-Ambient temperature

Without oil seal
Rated torque ratio(%)



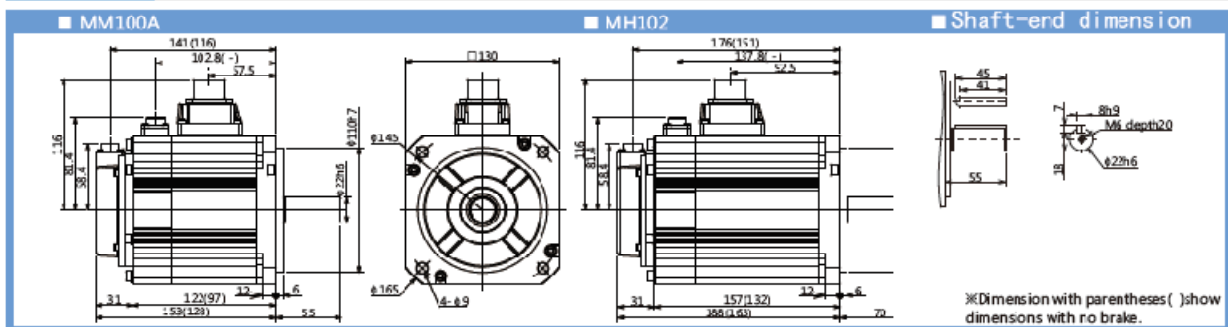
With oil seal
Rated torque ratio(%)



Specifications

| Items | | Units | Specification | |
|------------------------------------|------------------------|------------------------------------|---------------------------|-------------------------|
| Model Name | | | 1KW Middle inertia MM100A | 1KW High inertia MH100A |
| Fitting flange size | | mm | □130 | |
| Approximate mass | Without brake | kg | 5.6 | 7.6 |
| | With brake | | 7.0 | 9.0 |
| Rated voltage | | V | AC200 | |
| Rated output | | W | 1000 | |
| Rated torque | | N·m | 4.77 | |
| Instantaneous max. torque | | N·m | 14.3 | |
| Rated current | | A rms | 5.6 | |
| Instantaneous max. current | | A rms | 15.6 | |
| Rated speed | | r/min | 2000 | |
| Max. speed | | r/min | 3000 | |
| Torque constant | | N·m/A | 0.88 | |
| Induced voltage constant per phase | | MV(r/min) | 30.9 | |
| Rated power rate | Without brake | KW/S | 50.0 | 9.2 |
| | With brake | | 36.5 | 8.6 |
| Mechanical time constant | Without brake | ms | 0.76 | 4.17 |
| | With brake | | 1.05 | 4.43 |
| Electrical time constant | | ms | 10.1 | |
| Moment of inertia | Without brake | $\times 10^{-4}$ Kg·m ² | 4.56 | 24.9 |
| | With brake | | 5.24 | 26.4 |
| Brake specification | Usage | — | Holding | |
| | Rated voltage | V | DC24V \pm 10% | |
| | Rated current | — | 1 | |
| | Static friction torque | | 9.55 or more | |
| | Suction time | ms | 120 at 100% voltage | |
| | Release time | ms | 30 at 100% voltage | |
| Release voltage | | V | DC 1V or more | |

External Dimensions



Supplement to Motor Specification

Ambient conditions for use

| Items | Units | Specification |
|---------------------------------|------------------|---|
| Ambient temperature for use | °C | 0~40(Without condensation) Note 1) |
| Ambient humidity for use | %RH | 20~85(Without condensation) |
| Ambient temperature for storage | °C | -20~65(Highest temperature guaranteed: 80 degrees, 72hours) Note 2) |
| Ambient humidity for storage | %RH | 20~85(Without condensation) |
| Atmosphere for use/storage | — | Indoors(No: subject to rainwater or direct sunlight); free from corrosive gas, flammable gas, flammables, grinding fluid, oil mist, or dust |
| Insulation class | — | Class B |
| Insulation resistance | — | 1000 VDC megger 5MΩ or more |
| Dielectric strength | — | At 1500 V AC 50/60 Hz for 1 minute 10mA or less |
| Vibration class | — | V 15 |
| Vibration resistance | m/s ² | 49 (5G) |
| Impact resistance | m/s ² | 98 (10G) |
| Protective construction | — | IP65(Excluding shaft penetrating section and connectors) |
| Time rating | — | Continuous |
| Operating position | — | All directions |
| Direction of rotation | — | Normal: CW, Reverse: CCW |



*Note 1) The temperature for use is the temperature measured at a point 5cm apart from the motor.
 *Note 2) This is a temperature that can be tolerated only for a short period such as during transportation

Encoder specification

| Items | Units | Specification |
|---------------------------------------|---------------------|---|
| Motor Model Name | — | M□□□□□□□□N** M□□□□□□□□A** |
| Encoder specification | — | 17 bit (incremental) 17 bit (absolute) |
| Encoder room temperature | °C | 0~85 |
| Resistance to external magnetic field | mT | ±2 (20G) or less |
| Rated voltage | V | DC 4.5V~5.5V |
| External battery voltage | V | — DC 2.4V~5.5V |
| Current consumption | mA | 160 typ |
| State of low power consumption | μA | — Typ 10μA |
| Single revolution resolution | — | 131,072(17bit) |
| Multi-revolution count | count/turn | — 65,536 Count |
| Maximum speed | r/min | 6,000 |
| Input/ Output form | — | EIA - 422B(half-duplex) |
| Count-up direction | — | CCW |
| Communication specification | Transmission method | — Half-duplex asynchronous serial communication |
| | Communication speed | Mbps |



Count-up direction CCW

Output shaft permissible load

| Items | Units | Specification | | | | | | | |
|-------------------------|-------|----------------|-----------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|----------------|
| | | 50W MM500□2 | 100W MM101□2 | 200W MA201□2 MH201□2 | 400W MA401□2 MH401□2 | 750W MA751□2 MH751□2 | 1KW MM102□2 MH102□2 | 1.5KW MM152□2 MH152□2 | 2KW MM202□2 |
| Permissible radial load | N | 68 | 68 | 245 | 245 | 392 | 490 | 490 | 490 |
| Permissible thrust load | N | 58 | 58 | 98 | 98 | 147 | 196 | 196 | 196 |



※At the midpoint of the thrust protrusion